## REMARKS

Claims 1-4, 8-14, and 43 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the remarks contained herein.

### REQUEST FOR WITHDRAWAL OF FINAL REJECTION

Applicants believe that finality of rejection has been applied prematurely and request that the Examiner reconsider and withdraw the finality of the latest action.

The Office Action mailed February 1, 2006 asserts a rejection based on similar grounds (*i.e.*, obviousness under 35 USC § 103) as a rejection in the earlier Office Action mailed November 16, 2005, which Applicants have traversed. In fact, both the traversed rejection and the present rejection contain the same reference (Wilson et al. "Thin-film catalyst layers for polymer electrolyte fuel cell electrodes," J. of Applied Electrochemistry, 22 (1992)), and grounds for the present rejection could have been raised in the former Office Action (mailed November 16, 2005). Consequently, Applicants have not been afforded a proper opportunity to address the Examiner's subsequent positions based on the common reference.

### REJECTION UNDER 35 U.S.C. § 103 – WILSON ET AL. IN VIEW OF R.B. MOORE ET AL. AND WILSON

Claims 1, 4, 9, 11, 12, and 43 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wilson et al. "Thin-film catalyst layers for polymer electrolyte fuel cell electrodes," J. of Applied Electrochemistry, 22 (1992) (hereinafter Wilson) in view of R. B. Moore et al. "Procedure for Preparing Solution-Cast Perfluorosulfonate Ionomer Film and Membranes" 58 Anal. Chem. 2569-70 (1986) (hereinafter Moore) and Wilson (U.S. Pat. No. 5,234,777) (hereinafter '777). This rejection is respectfully traversed as the combination of these three references fails to establish a prima facie case of obviousness.

The Office Action, mailed February 1, 2006, failed to assert the three requisite conditions for a *prima facie* case of obviousness. First, there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings to arrive at Applicant's invention. Second, there is no reasonable expectation of success. Finally, the prior art references do not teach or suggest all the claim limitations.

First, the combination of Wilson, Moore, and the '777 reference fails to suggest or provide the requisite motivation to a skilled artisan to reproduce the present invention. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). The present invention applies a slurry to a non-porous polymeric substrate, the *substrate having sufficient structural integrity to facilitate reuse*. See Claim 1 and paragraph [0005]. Such a polymeric substrate is selected to have elastic deformation properties (*i.e.*, elasticity), so that significant deformations do not occur during processing that may impact the catalyst film (*i.e.*, electrode) and/or the membrane. Further, elastic non-porous polymeric substrates may prevent physical distortion or deformable stretching of the substrate during a separating or peeling step, where the catalyst film is removed from the substrate. These beneficial elastic properties of the non-porous polymeric material facilitate reuse of the substrate for subsequent decal applications. See paragraph [0040]. For example, embodiments of the present invention include separating the substrate from the film formed from the slurry such that *the substrate may be reused.*

Nowhere in the three references is it suggested to use a non-porous polymeric substrate having sufficient structural integrity to facilitate reuse, and nowhere is it suggested to reuse such a substrate. There is no suggestion that the blank of Teflon® film in Wilson (see Fig. 1(a) and section 3) or the release blank in '777 (see col. 4, lines 47-49, 64-66), which can be Teflon®, have sufficient structural integrity so that it may be reused. In Moore, there is no disclosure regarding casting a film on a substrate; instead, the reference focuses on the solubility of perfluorosulfonate ionomers in various solvents (see experimental section).

The three references, individually and in combination, would not motivate a skilled artisan to produce the present invention. The present disclosure addresses cost issues in the manufacture of fuel cells, and embodiments include reusing a non-porous polymeric substrate to that end. See paragraphs [0003], [0004], and [0038]; and see 112 in Fig. 4. In contradistinction, Wilson, Moore, and the '777 reference are not focused on this aspect of manufacturing fuel cells; and, therefore, would not motivate a skilled artisan to choose a substrate that has sufficient structural integrity to facilitate reuse. For example, embodiments of the present disclosure can include a continuous process using a continuous strip of a non-porous polymeric substrate that is reused. See paragraph [0007] and Fig. 7. Such embodiments necessitate a substrate having sufficient integrity and characteristics that it can be reused. The Wilson, Moore, and '777 references do not suggest or motivate a skilled artisan to produce the present invention; therefore, the present invention is not obvious.

Secondly, the combination of Wilson, Moore, and the '777 reference also fails to provide any expectation of success in producing the present invention. If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). There is nothing in these references that would lead a skilled artisan to believe the substrate could be reused. Specifically, there is no disclosure in these references of a non-porous polymeric substrate, having sufficient structural integrity and hence beneficial elastic character, which would be suitable for reuse. As a result, the present invention is not obvious in view of the references.

Finally, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974); "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). The combination of Wilson, Moore, and '777 fails to disclose all the claim limitations of the present invention. Nowhere in the combination of references is disclosed a non-porous polymeric substrate (of ethylene tetraflurorethylene, polyimide, polytetrafluoroethylene, or polyphenylsulfone) having sufficient structural integrity to facilitate reuse. Wilson uses a Teflon® film (see Fig. 1(a) and section 3) and '777 uses a release blank, which can be Teflon® film (see col. 4, lines 47-49, 64-66). But, neither of these Teflon® (*i.e.*, polytetrafluroethylene) films specifically includes a substrate that has sufficient structural integrity to facilitate reuse. While the general material in these references is polytetrafluroethylene, there is no limitation in either reference as to reusing the substrate or, importantly, in using a polytetrafluroethylene substrate that has the integrity to withstand reuse. For example, the films in the references could be for a single use and made as thin as possible to avoid waste and material costs, as opposed to reusing them. Such films would not have the structural integrity to facilitate reuse. Therefore, at least two distinct features exist in embodiments of the present invention that are absent from the combination of the aforementioned references. Consequently, the combination of the aforementioned references fails to establish a prima facie case of obviousness.

Applicants note the Examiner's additional rejections pertain to claims dependent on independent Claim 1. Applicants submit that these rejections are traversed, as the preceding arguments have demonstrated that Claim 1 is not obvious in view of the Wilson, Moore, and '777 references, and hence all pending dependent claims (*i.e.*, Claims 2-4 and 8-14) are thereby not obvious. If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Withdrawal of the rejections and reconsideration are respectfully requested.

## CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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